

REMARKS

Applicants respectfully request further examination and reconsideration of the instant case in view of the instant response. Claims 1, 8 and 14 are amended herein. Claims 1-19 remain pending in the case. No new matter has been added as a result of these amendments.

Information Disclosure Statement

A corrected information disclosure statement is filed in conjunction with the response to the Office Action mailed on January 12, 2005.

Specification

Please amend the specification as follows:

On page 8, lines 14-16-

-In one embodiment of the invention, the metallic plating is silver or
gold, but the plating can be any light reflective material that can be deposited
on the surface of the ceramic package 110.-

Claim Rejections35 U.S.C. §103

Claims 1, 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (U.S. Patent 6,715,901), hereafter referred to as Huang, in view of Zou et al. (U.S. Patent 6,186,649), hereafter referred to as Zou. The rejection is traversed for the following rational.

Claim 1 has been amended to include the limitation " a ceramic cavity comprising a ceramic substrate for mounting a light emitting diode in a single cavity and substantially vertical ceramic sidewalls for minimizing light leakage." The claimed limitations of the present invention are very different from the teachings of Huang.

Huang fails to teach or suggest substantially vertical ceramic sidewalls. In fact, Huang teaches away from substantially vertical sidewalls, as claimed because Huang teaches half circle cavities (Figure 5), non-vertical sidewalls. This is very different from "substantially vertical ceramic sidewalls," as claimed.

Furthermore, Claim 1 has been amended to include the limitation "a single light emitting diode package." Claim 1 has been amended to further distinguish the present invention over Huang. In Figure 4, Huang teaches an array of diode packages on single substrate. With Huang, an array of diodes

on a single substrate are used to produce more light for use in a projector system. The LED of present invention is directed towards use in smaller applications, such as a cell phone, for example.

Zou fails to remedy the deficiencies of Huang. It is respectfully submitted that Zou fails to teach or suggest a ceramic package comprising substantially vertical ceramic sidewalls, as claimed. In addition, one skilled in the art would not be motivated to combine the teachings of Huang with Zou because they directed towards different inventions. Huang teaches a projector which projects light in a predetermined direction and Zou teaches a linear light source, which emits light in all directions (Zou column 5 lines 1-3). For this rational, Claims 1, 4, 5 and 7 are patentable over Huang in view of Zou.

Claims 2, 14, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Zou and further in view of Kosman et al., (U.S. Patent 3,821,590), hereafter referred to as Kosman. The rejection is traversed for the following rational.

As stated above, the combination of Huang and Zou fails to teach a ceramic cavity comprising substantially vertical ceramic sidewalls for reducing light leakage, as claimed in independent Claims 1 and 14.

Kosman fails to remedy the deficiencies of Huang and Zou. In fact, Kosman teaches away from the claimed invention by teaching "the concavities are spherical." This teaches away from substantially vertical sidewalls, as claimed. For this rational, Claims 2, 14, 16, 17, and 19 are patentable over Huang in view of Zou and further in view of Kosman.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Zou and further in view of Barlian (U.S. Patent 4,600,977), hereafter referred to as Barlian. As stated above, the combination of Huang and Zou fails to teach or suggest substantially vertical ceramic sidewalls and Barilan fails to teach or suggest this limitation. As such, Claim 3 is patentable over the combination of Huang, Zou and Barlin.

Claim 6 is rejected under 35 U.S.C 103(a) as being unpatentable over Huang in view of Zou in further view of Gleason (U.S. Patent 1,340,443), hereafter referred to as Gleason. As stated above, the combination of Huang and Zou fails to teach or suggest substantially vertical ceramic sidewalls and Gleason fails to teach or suggest this limitation. As such, Claim 6 is patentable over the combination of Huang, Zou and Gleason.

Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang and Kosman. As stated above, Huang fails to teach or suggest substantially vertical sidewalls, as claimed. Kosman fails to teach or suggest this limitation. In fact, Kosman teaches away from the claimed

invention by teaching "a parabolic reflector" (column 3 line 14). This teaches away from "substantially vertical," as claimed. For this rational, Claims 8 and 13 are patentable over Huang in view of Kosman.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Kosman and further in view of Barlian. As stated above, Huang and Kosman fail to teach or suggest substantially vertical ceramic sidewalls and Barlian fails to teach or suggest this limitation. As such, Claim 6 is patentable over the combination of Huang, Kosman and Barlian.

Claims 10 and 11 are rejected under U.S.C. 103(a) as being unpatentable over Huang in view of Kosman and further in view of Zou. The rejection is traversed for the following rational. For the rational presented above in support of Independent Claim 1, the combination of Huang, Kosman and Zou fails to teach or suggest substantially vertical sidewalls, as claimed. Independent Claim 8 recites similar limitations. For this rational, Claims 10 and 11 are patentable over the combination of Huang, Kosman and Zou.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Kosman in further view of Gleason. The rejection is traversed for the following rational. As stated above, Independent Claim 8 recites the limitation of "substantially vertical sidewalls." The combination of Huang, Kosman and Gleason fails to teach or suggest this limitation. For this

rational, Claim 12 is patentable over the combination of Huang, Kosman and Gleason.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Zou and Kosman. As stated above, the combination of Huang and Zou fails to teach or suggest substantially vertical sidewalls to reduce light leakage as claimed. Kosman fails to teach or suggest this limitation. As such, Claim 15 is patentable over the combination of Huang, Zou and Kosman.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Zou in further view of Kosman and yet in further view of Gleason. Independent Claim 14 recited the limitation "substantially vertical sidewalls." The combination of Huang, Zou, Kosman and Gleason fails to teach or suggest this limitation. For this rational, Claim 18 is patentable over the combination of Huang, Zou, Kosman and Gleason.

CONCLUSION


In light of the above listed remarks, reconsideration of the amended Claims is requested. Based on the arguments presented above, it is respectfully submitted that Claims 1-2, 4-5, 8, 10-12, 14, 16-18 overcome the rejections and objections of record and, therefore, allowance of Claims 1-2, 4-5, 8, 10-12, 14, 16-18 is earnestly solicited.

Should the Examiner have a question regarding the instant response, the Applicants invite the Examiner to contact the Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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